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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANTONIUS EMMERINK, EGON KLEIN, ANDREAS STEFFAN, RAINER WINDECKER, and STEFFI WINKLER

Appeal 2009-006420
Application 10/088,682
Technology Center 2400

Before ROBERT E. NAPPI, JOHN C. MARTIN, and BRADLEY W. BAUMEISTER, *Administrative Patent Judges*.

MARTIN, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

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[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 2, 5, 10-15, and 19-21. Claims 3, 4, 6-9, and 16-18 stand objected to for depending on rejected claims. Final Action 5.

We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

A. Appellants' invention

Appellants' invention relates to a method and an arrangement "for setting up and clearing down, and sustaining" communications links, particularly within the context of a private branch exchange and terminals which are to be connected. Specification 1:10-14. The Examiner, without objection by Appellants, interprets the term "clearing down" to mean "disconnect." Final Action 2, penultimate line.

Figure 1 of the Application is reproduced below.

FIG 1

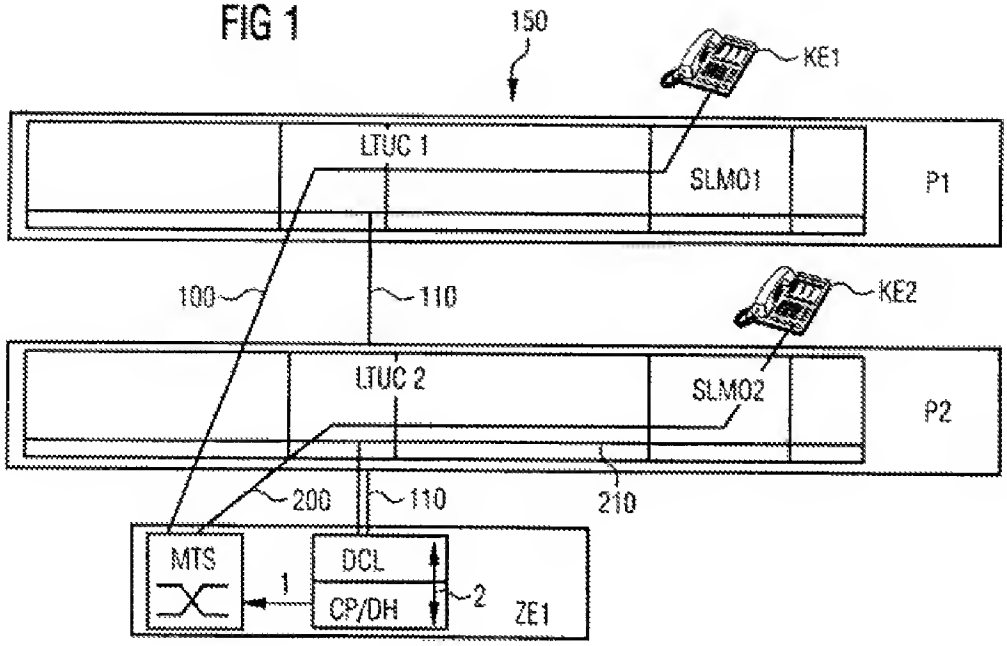

Figure 1 shows an example of a known private branch exchange 150 having two peripheral devices P1 and P2, to which communications terminals KE1 and KE2 operating on a digital or analog basis are respectively connected (*id.* at 2:8-11). Terminals KE1 and KE2 are respectively connected to subscriber line modules SLMO1 and SLMO2, which supply or take digital data intended for the respective terminals or coming from the respective terminals to/from the PCM data streams 100 and 200, using timeslots stipulated by signaling (*id.* at 2:18-23). As shown in Figure 1, these PCM data streams 100 and 200 are carried by a transport network that connects a switching matrix MTS of central device ZE1 to peripheral devices P1 and P2. Central device ZE1 is additionally connected to peripheral devices P1 and P2 by signaling connections 110 and 120, which involve a logical representation and not a physical representation (*id.*

at 2:24-26). "In reality, . . . the transport data and the signaling data are transmitted in the same connecting cable" (*id.* at 2:28-30). In central device ZE1, the call processing section CP controls the setup and clear-down of connections using equipment-specific interface functions DH, which can be in the form of program modules (*id.* at 3:7-11).

Figure 2 is reproduced below.

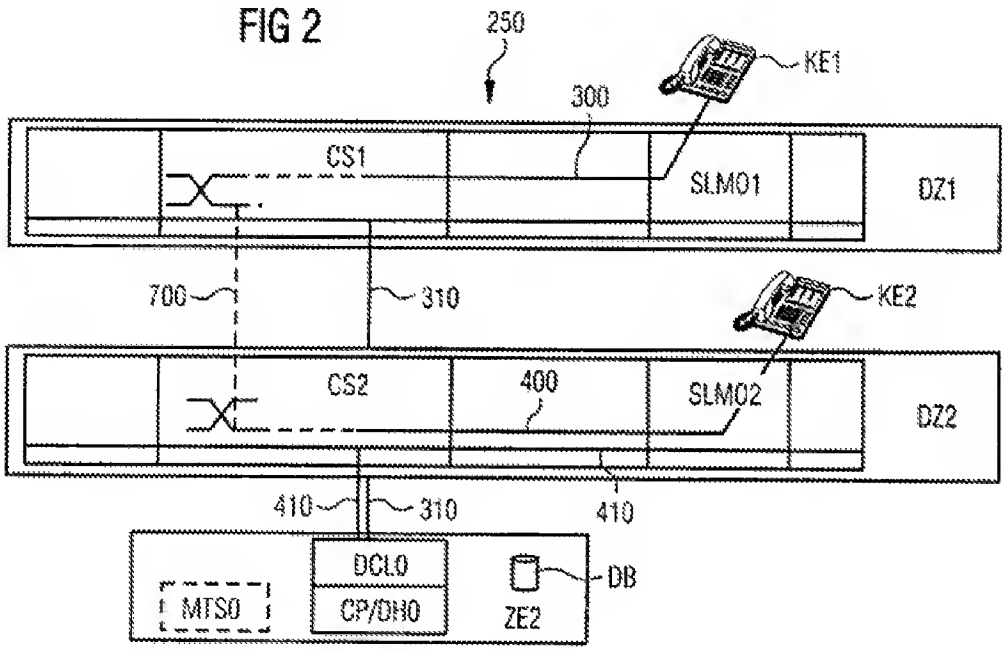

Figure 2 shows an example of Appellants' communications arrangement (*id.* at 9:13-14). Central device ZE2 is connected to local devices DZ1 and DZ2 by only a control network 310/410 (*id.* at 10:3-10). Local devices DZ1 and DZ2 are connected to each other by a separate transport network 700, which can be a public or private voice or data network (*id.*). Local devices DZ1 and DZ2 have respective local switching centers CS1 and CS2 which, for example, can be Ethernet or ATM

(asynchronous transfer mode[2]) access devices (*id.* at 10:31-34). Control lines 410 and 310 provide at least one respective control information item for the respective local switching centers CS1 and CS2 for the purposes of setting up the communications link, the control information item being derived from a *timeslot-based* control information item (*id.* at 11:4-9).

Figure 4 is reproduced below.

FIG 4

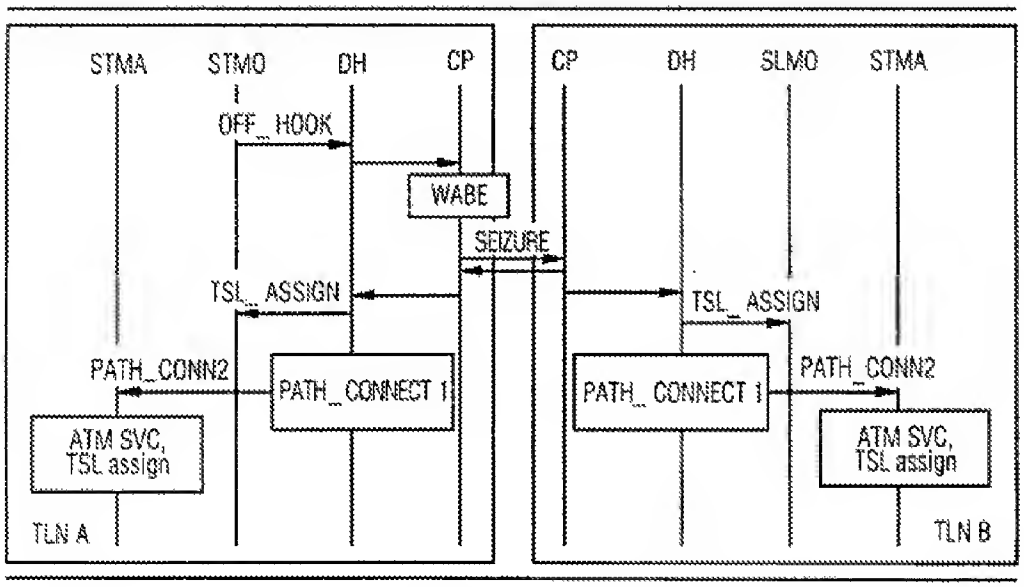

Figure 4 shows, in simplified form, an example of a message flow between two local devices, for the purposes of connection control between the terminal of a subscriber A, TLNA, and the terminal of a subscriber B, TLNB (*id.* at 13:29-33). The transport network used in this case is, by way of example, an ATM network, and the time sequence for the messages is

[2] Specification 18:18.

shown from top to bottom (*id.* at 13:33-36). As indicated by the letters STMA in Figure 4, each local switching center CS1 or CS2 includes a functional unit STMA as a gateway for converting the timeslots for the PCM data stream into a cell stream of ATM cells (*id.* at 13:37-14:4).[3] At the end of the connection procedure shown in Figure 4, each STMA receives a PATH_CONN2 message that includes timeslot information ZS and data link information PD (*id.* at 14:18-21).

Figure 5 is reproduced below.

FIG 5

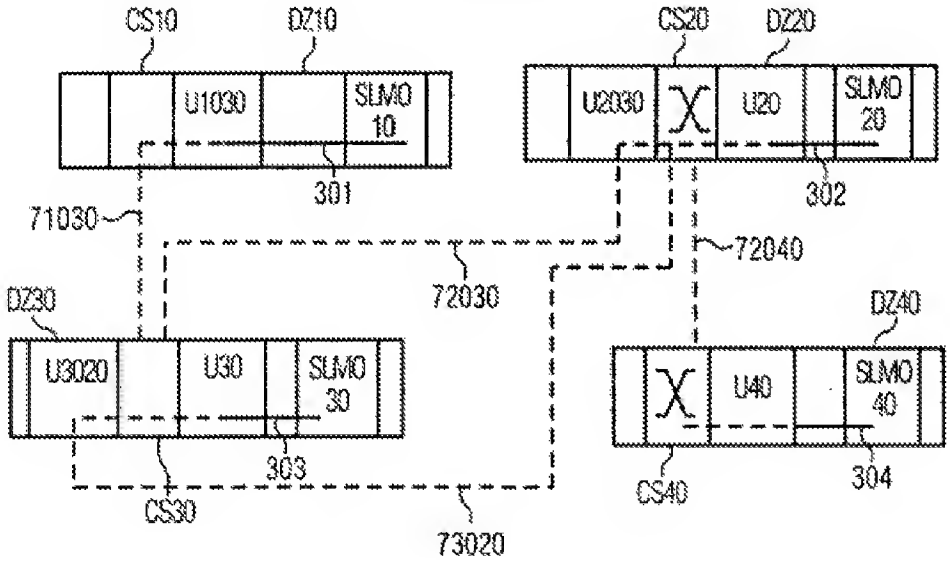

Figure 5 shows as an exemplary embodiment of a communications arrangement in which local devices DZ are connected to one another by a heterogeneous transport network, wherein connection elements are produced using different communications media or by handling different

[3] The meaning of "STMA" is not explained in the Specification.

communications protocols (*id.* at 16:10-17). As in the arrangement shown and described in Figure 2, this mixed communications system is also controlled by a central control device (not shown), which transmits control messages to the local switching centers CS in order to set up a connection and to sustain or clear down a connection (*id.* at 16:19-25). Local devices DZ10 to DZ40 have subscriber line modules SLMO 10 to SLMO 40 for communications terminals (not shown) (*id.* at 16:35-37). Dashed lines 71030 and 72030 represent IP (Internet Protocol) connections, while dashed lines 72040 and 73020 represent ATM connections (*id.* at 17:9-13).

In order to actuate the different connection element links 72030 (IP) and 73020 (ATM), the central control device requires appropriate complementary control information for control messages for controlling connection setup between communications subscribers, said control information relating to the type of connection path and *protocol-specific* information, i.e. gateways to be used (*id.* at 18:20-27).

B. The claims

The independent claims are claims 1 and 10. Claim 1 reads as follows:[4]

> 1. A method for setting up and/or clearing down and sustaining a communications link, comprising:
>
> providing a communications link between at least two local devices in a transport network by local switching centers

[4] Claim 10 is reproduced *infra*.

associated with the local devices;

controlling the setup and/or clear-down of the communications link by a central control device via a control network;

controlling the connection setup and/or clear-down in the transport network using at least two control information items;

using a connection information item defining a *timeslot* connection via a switching matrix representing a first control information item; and

providing a protocol information item representing a second control information item for the central control device and/or for the local devices to select communications *protocols* to be used and useable transport media.

Claims App. (Br. 14) (emphases added).[5]

C. The references

The rejection is based on the following references:

Shiomoto	US 6,731,628 B1	May 4, 2004
Rao	US 6,757,823 B1	June 29, 2004

D. The rejection

Claims 1, 2, 5, 10-15, and 19-21 stand rejected under 35 U.S.C. § 103(a) for obviousness over Shiomoto in view of Rao. Final Action 3.

[5] Appeal Brief filed May 7, 2008.

ANALYSIS

Shiomoto's invention relates to Synchronous Transfer Mode (STM) communications networks, and in particular to techniques for transferring data with an Internet Protocol (IP) address by way of an STM connection. Shiomoto, col. 1, ll. 15-18. Shiomoto explains that a conventional STM-based circuit-switched network requires setting up an STM connection in advance from a source user terminal to a destination user terminal and that, as a result, such circuit-switched networks are only being considered for leased data circuits between large businesses (col. 1, ll. 31-35). Shiomoto's invention avoids the need to set up connections in advance.

Figure 1 is reproduced below.

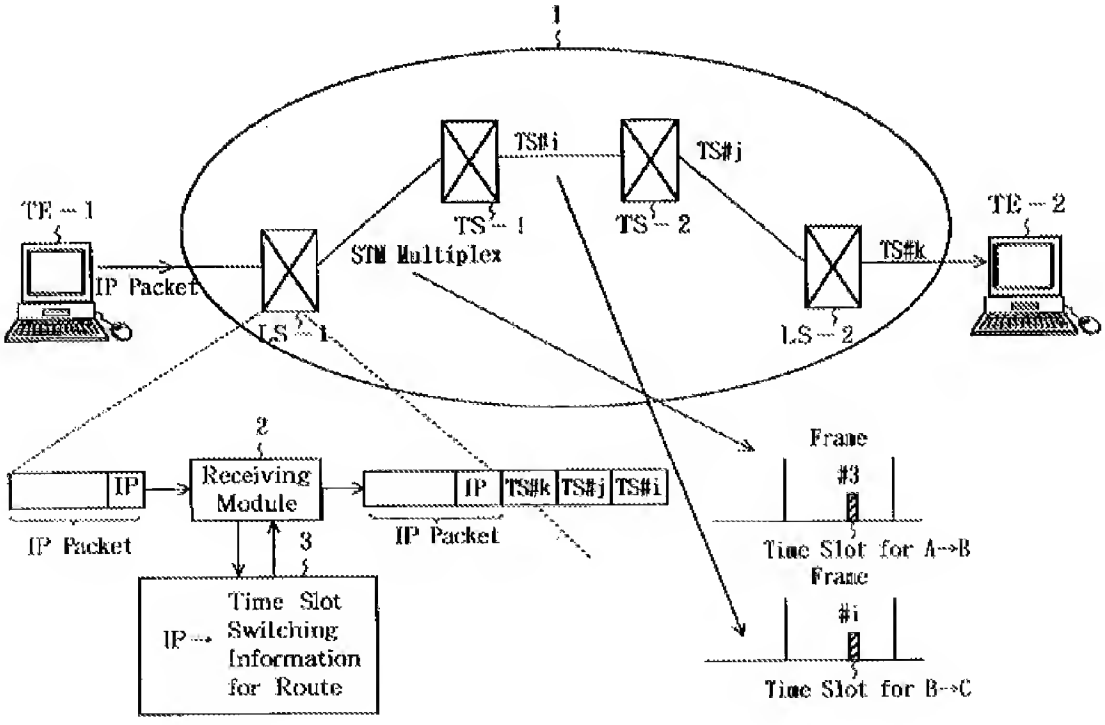

FIG.1

Figure 1 shows the basic configuration of a circuit-switched network comprising local switches LS-1 and LS-2 respectively serving terminals TE-1 and TE-2, and transit switches TS-1 and TS-2 that connect local switches LS-1 and LS-2 to one another (col. 5, ll. 47-51). The local switches and transit switches together comprise an STM network 1 (col. 5, ll. 51-52). Local switch LS-1 (Fig. 2) comprises a receiving module 2 for adding to the IP packet a header that includes the routing information corresponding to the IP address, this routing information being obtained from a table 3 (col. 5, l. 60 to col. 6, l. 1). This routing information is preferably time slot switching information identifying the time slot in which the packet is to be written at each transit switch (col. 2, ll. 45-48). The time slot switching information thus indicates the order of the time slot relocations required when a packet is transferred through the STM network, these relocations being carried out at each transit switch and at the local switch serving the destination terminal (col. 2, ll. 48-53). As a result, "dedicated connections are not set up in advance in the STM network. Instead, each time a switch receives a packet it sets up the time slot in which the packet will be carried at that point in time." (Col. 2, ll. 15-18.)

The Examiner, when discussing claim 1, reads the recited "two local devices" on terminals TE-1 and TE-2, the associated "local switching centers" on local switches LS-1 and LS-2, the "connection information item defining a timeslot connection via a switching matrix" on the added routing information added to the header, and the "protocol information item representing a second control information item" on the IP address in the

header. Final Action 2. The Examiner finds that "Shiomoto fails to disclose communications system setup and/or disconnect of communications link" (Final Action 2) and relies on Rao, discussed below, to cure this deficiency (*id.* at 3). The Examiner, addressing claim 1 and independent claim 10 (addressed *infra*), concludes that it would have been obvious "to incorporate the teachings of Rao within Shiomoto so as to provide a simplified and secure call setup and tear down procedure for voice and data communications amongst different devices within an IP telephony network." *Id.* at 3.

Appellants have responded by arguing, *inter alia*, that

> [c]laim 1 requires, for example, controlling the setup and/or clear-down of the communications link by a central control device via a control network. Rao fails to disclose this feature. Rather, Rao teaches an H.323 gateway for network interfacing between an IP packet data network and a circuit switched network (col. 2, lines 47-52). Here, Rao explains that the gateway is a node that connects two otherwise incompatible networks (col. 2, lines 53-54). The gateway of Rao, therefore, does not correspond to the claimed central control device.

(Br. 10.) The Answer does not acknowledge, let alone identify any error in, this argument, which we find persuasive for the following reasons.

Rao's invention relates generally to providing enhanced security for Internet telephony calls and more particularly to providing a secure connection for Voice Over IP (VoIP) calls using the H.323 protocol. Rao, col. 1, ll. 7-10. Rao explains that current methods of providing security for VoIP calls "suffer from delays in call setup time, complex handshaking procedures, and significant protocol overhead. Moreover, current H.323 VoIP implementations do not prevent signaling information from being

viewed by unscrupulous computer hackers on the IP network used for VoIP calls." (Col. 1, ll. 36-41.)

Figure 1 of Rao is reproduced below.

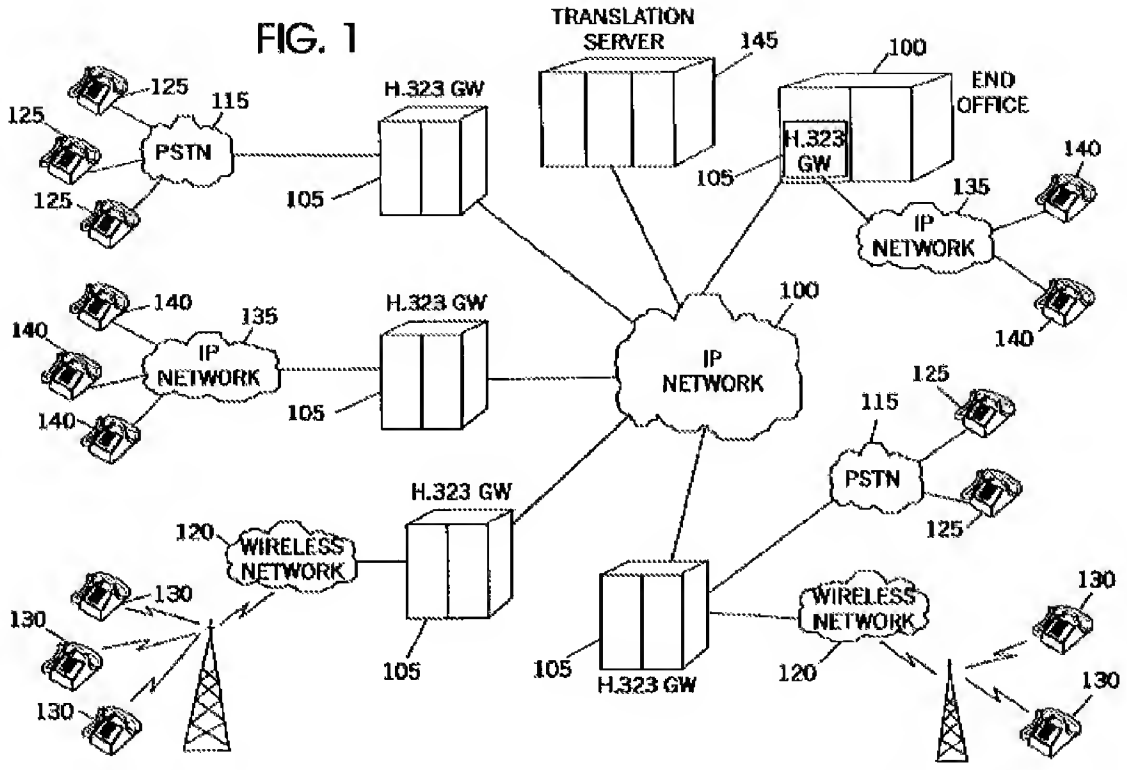

Figure 1 illustrates one possible embodiment of a network configuration in accordance with Rao's invention (col. 2, ll. 18-19).

Figure 3 of Rao is reproduced below.

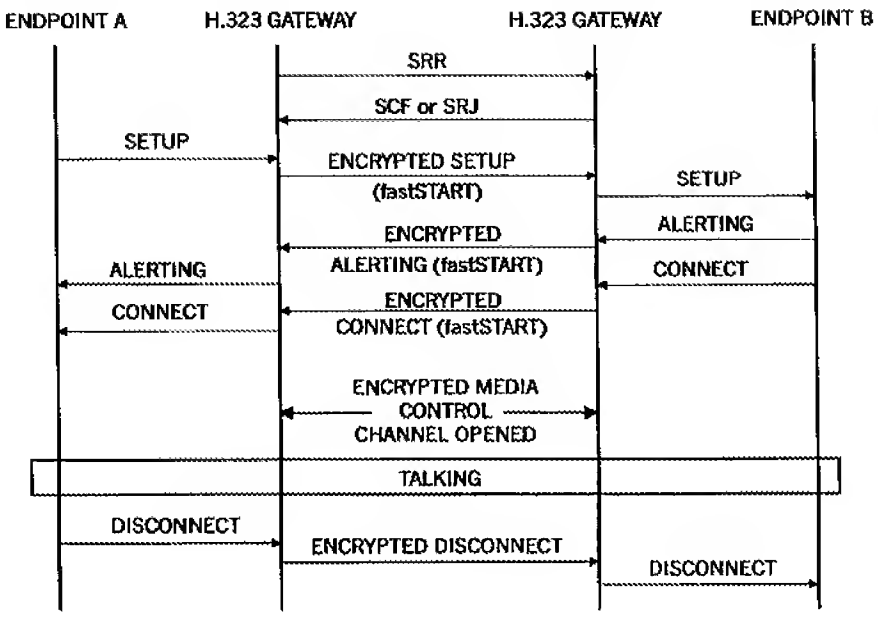

FIG. 3

Figure 3 is a message flow diagram illustrating secure H.323 VoIP call messaging according to Rao's invention (col. 2, ll. 22-24). We note that the exchanged messages include, for example, "SETUP" and "DISCONNECT." All messaging between the H.323 gateways is encrypted including the actual conversation between the parties, including the initial messaging (SETUP, ALERTING, CONNECT) establishing the connection between the endpoints (col. 5, ll. 26-31).

The Examiner has not explained what, if anything, in the combined reference teachings corresponds to the recited "central control device" for "controlling the setup and/or clear-down of the communications link . . . via a control network." The Examiner therefore has not provided the necessary "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398,

418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). For this reason, we do not sustain the rejection of claim 1 or the rejection of either of its dependent claims 2 and 5.

Claim 10, which does not recite a central control device, reads as follows:

> 10. An apparatus for setting up and/or clearing down, and sustaining, a communications link, comprising:
>
> a transport network to provide a communications link;
>
> a control network to control the setup and/or clear-down of the communications link;
>
> a first device to control the connection setup and/or clear-down in the transport network via the control network, the device configured with a physical separation from the transport network, which output at least two control information items,
>
> and in which the transport network has at least two local devices to output and receive communications data; and
>
> a switching center to provide a communications link in the transport network, where at least one connection element of the communications link is in the form of a connection which uses the Internet Protocol as communications protocol.

Claims App. (Br. 15).

Appellants, addressing the rejection of claim 10 (and also claim 1), argue that the rejection is improper because (1) the proposed combination of reference teachings will result in an increase in overhead and (2) Shiomoto teaches away from such a combination by "mak[ing] it abundantly clear that overhead is a drawback and undesirable," citing *In re Haruna*, 249 F.3d

1327, 1335 (Fed. Cir. 2001). (Br. 11.) The Examiner responded by explaining that

> [t]he Examiner failed to find where Shiomoto discloses "overhead is a drawback and undesirable"[;] in sharp contrast Shiomoto explicitly states (col 2 lines 3-7)[:]
>
> > A unique feature of the present invention is that it adds a further header to a packet which already has a header (emphasis added) in which an IP address has been written, and thereby transfers the packet to the desired destination terminal via an STM network.
>
> This additional header allows for dynamic and efficient routing that does not restrict specific beginning and end points of routers, rather to reach its destination via any available routers within a network (col 2 lines 19-22). The additional header is interpreted to be an overhead, however, it is not undesirable (as applicant contends) rather prevents packet loss and jitter due to router overload by providing an alternate route to its destination. Thus base[d] on [the] above reasoning [the] Examiner asserts that 1) Shiomoto does not teach away from overhead rather it embraces it within its invention (again col 2 lines 3-22), and 2) incorporating encryption within Shiomoto would enhance the Shiomoto communications system by providing a secure transmission system and deter away from such incorporation.

(Answer 6-7) (emphasis omitted). Appellants, who did not file a reply brief, have not pointed out any error in the Examiner's above reasons for being unpersuaded by Appellants' "teaching away" argument.[6]

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[6] *See Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) (An appellant may attempt to overcome an examiner's obviousness rejection on appeal to the Board by: (A) submitting arguments and/or evidence to show that the examiner made an error in either (1) an underlying finding of

(Continued on next page.)

Appellants, further addressing claim 10 (and also claim 1), additionally argue that

> the Action fails to provide proper motivation for combining these references. The Examiner merely states that it would have been desirable to have incorporated the teach[ings] of Rao with Shiomoto, so as to provide a simplified and secure call setup and tear down procedure for voice and data communications amongst different devices with an IP telephony network. Although, using the method taught in Rao might make a system secure, Applicants fail to see how encrypting communications (as taught in Rao) can make them simpler. Encryption by definition would make communications more complex.

(Br. 11-12.) While we agree that incorporating the teachings of Rao into Shiomoto will result in an increase rather than a decrease in complexity, Appellants have not even asserted, let alone demonstrated, that this increase in complexity would have been considered too high a price to pay for the resulting increase in security. *See Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000) ("The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another.").

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fact upon which the final conclusion of obviousness was based or (2) the reasoning used to reach the legal conclusion of obviousness; or (B) showing that the prima facie case has been rebutted by evidence of secondary considerations of nonobviousness.).

For the foregoing reasons, we sustain the rejection of claim 10. For the same reasons, we sustain the rejection of its dependent claims 11-15 and 19-21, which are not separately argued. *In re Nielson*, 816 F.2d 1567, 1572 (Fed. Cir. 1987).

DECISION

The Examiner's rejection is sustained with respect to claims 10-15 and 19-21 and not sustained with respect to claims 1, 2, and 5.

The decision of the Examiner is therefore affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). *See* 37 C.F.R. § 1.136(a)(1)(v) (2010).

AFFIRMED-IN-PART

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